SKKD 81 H4 THYRISTOR BRIDGE, SCR BRIDGE

SEMIPACK® 1

Rectifier Diode Modules

SKKD 81 H4

Features

- Heat transfer through aluminium oxide ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- UL recognized, file no. E 63 532

Typical Applications*

- Non-controllable rectifiers for AC/AC converters
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motors
- Free-wheeling diodes

V_{RSM} V	V_{RRM} V	I_{FRMS} = 140 A (maximum value for continuous operation) I_{FAV} = 80 A (sin. 180; T_c = 87 °C)		
2100	2000	SKKD 81/20 H4		
2300	2200	SKKD 81/22 H4		

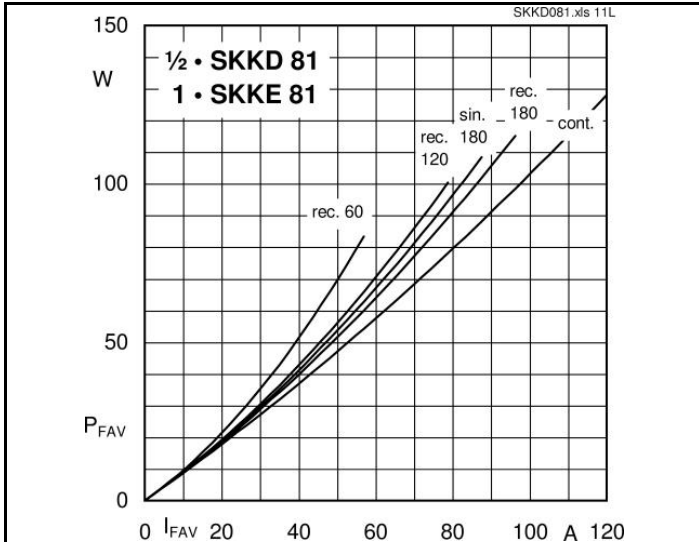| Symbol	Conditions	Values	Units
I_{FAV}	sin. 180; T_c = 85 (100) °C	82 (57)	A
I_D	P3/120; T_a = 45 °C; B2 / B6	63 / 70	A
	P3/180F; T_a = 35 °C; B2 / B6	135 / 175	A
I_{FSM}	T_{vj} = 25 °C; 10 ms	2000	A
	T_{vj} = 125 °C; 10 ms	1750	A
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms	20000	A²s
	T_{vj} = 125 °C; 8,3 ... 10 ms	15000	A²s
V_F	T_{vj} = 25 °C; I_F = 300 A	max. 1,55	V
$V_{(TO)}$	T_{vj} = 125 °C	max. 0,85	V
r_T	T_{vj} = 125 °C	max. 1,8	mΩ
I_{RD}	T_{vj} = 125 °C; V_{RD} = V_{RRM}	max. 4,5	mA
$R_{th(j-c)}$	per diode / per module	0,4 / 0,2	K/W
$R_{th(c-s)}$	per diode / per module	0,2 / 0,1	K/W
T_{vj}		- 40 ... + 125	°C
T_{stg}		- 40 ... + 125	°C
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	4800 / 4000	V~
M_s	to heatsink	5 ± 15 %	Nm
M_t	to terminals	3 ± 15 %	Nm
a		5 * 9,81	m/s²
m	approx.	95	g
Case	SKKD	A 10	

SKKD

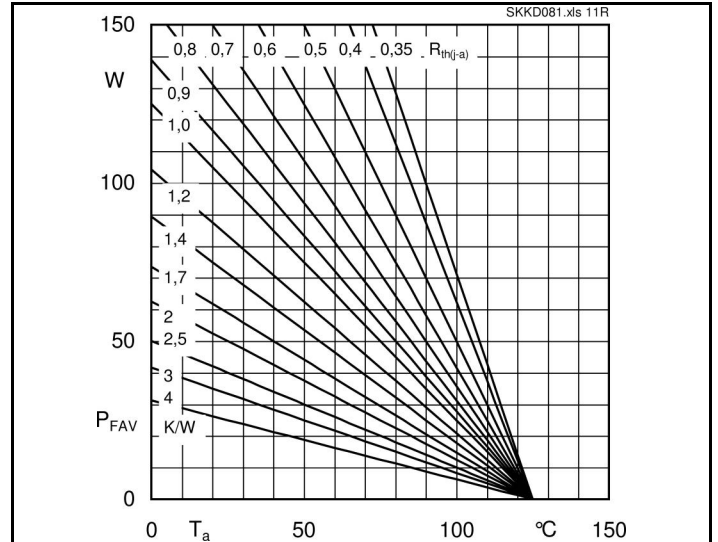Fig. 11L Power dissipation per diode vs. forward current

Fig. 11R Power dissipation per diode vs. ambient temperature
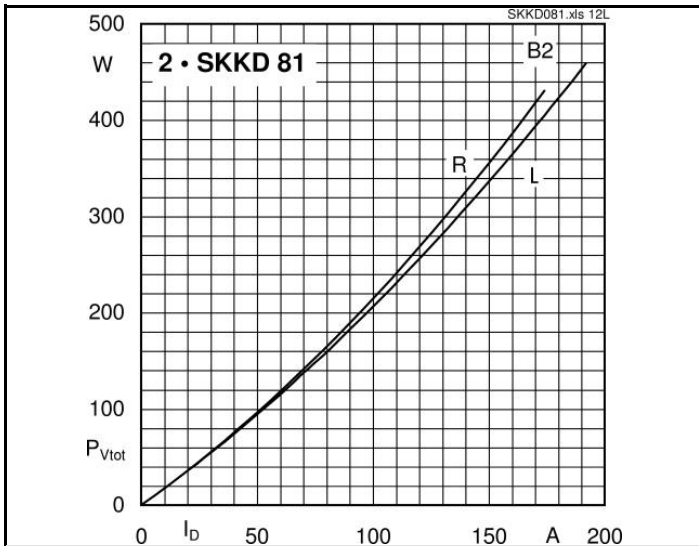
Fig. 12L Power dissipation of two modules vs. direct current
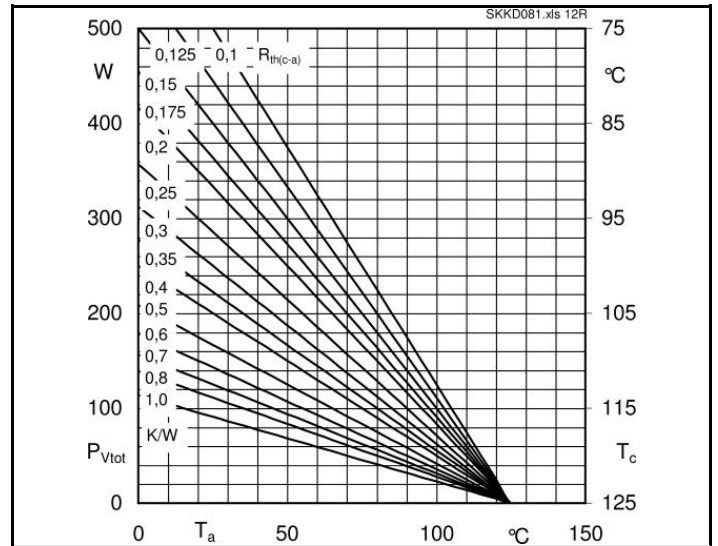
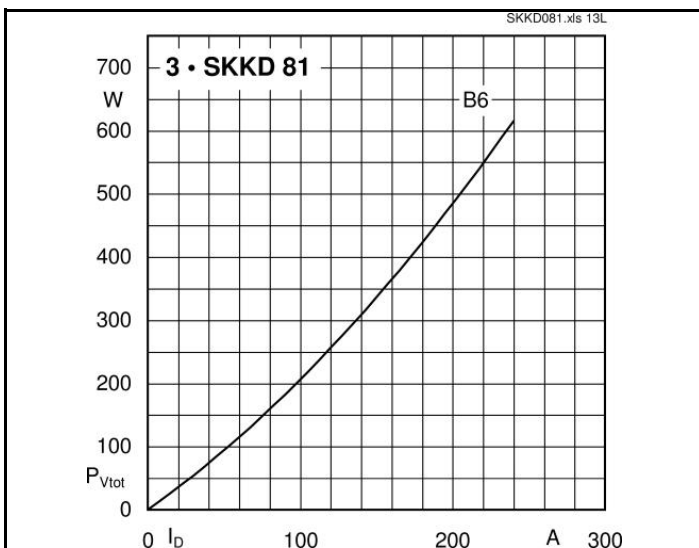Fig. 12R Power dissipation of two modules vs. case temperature

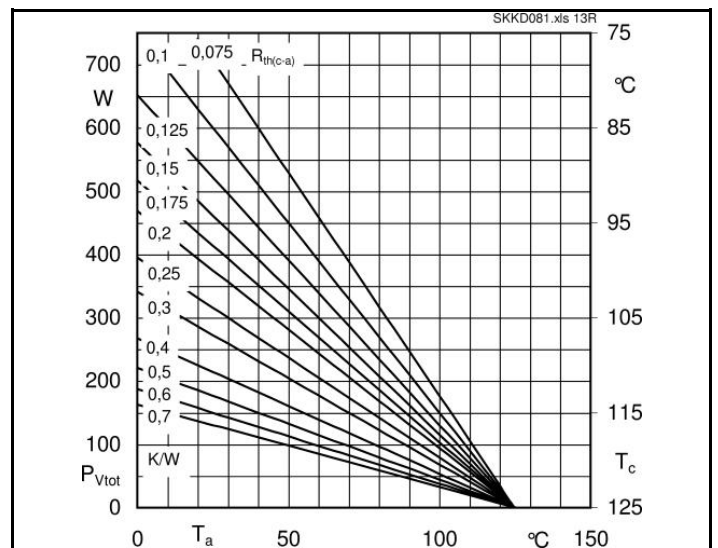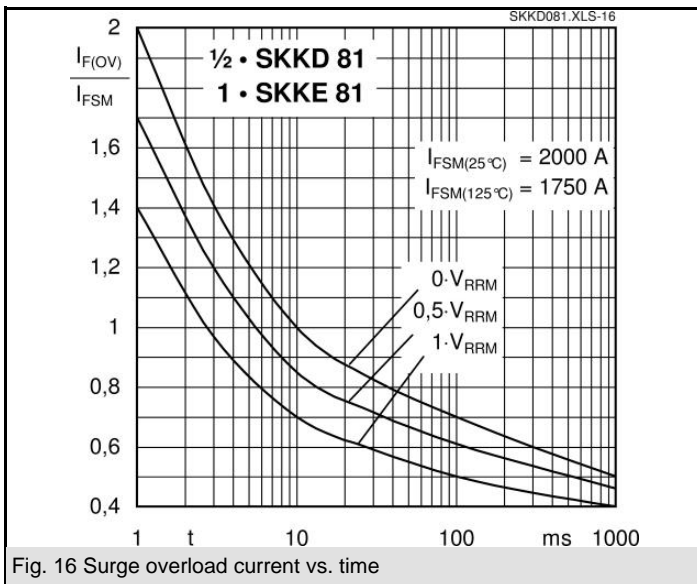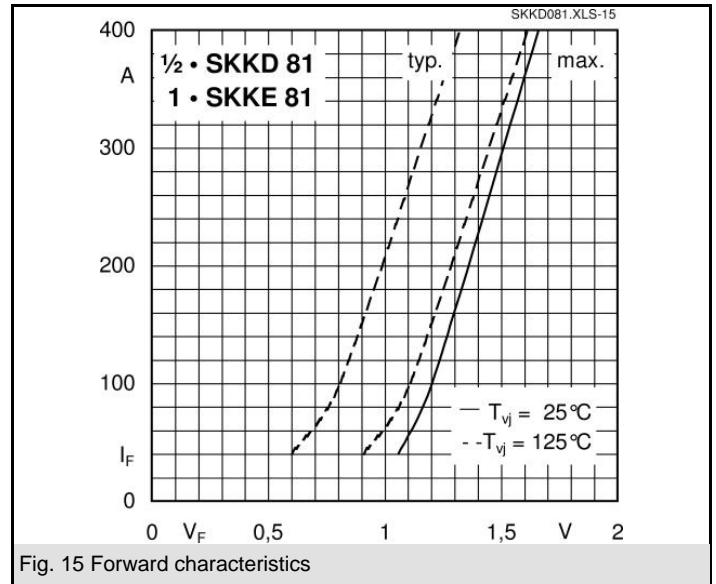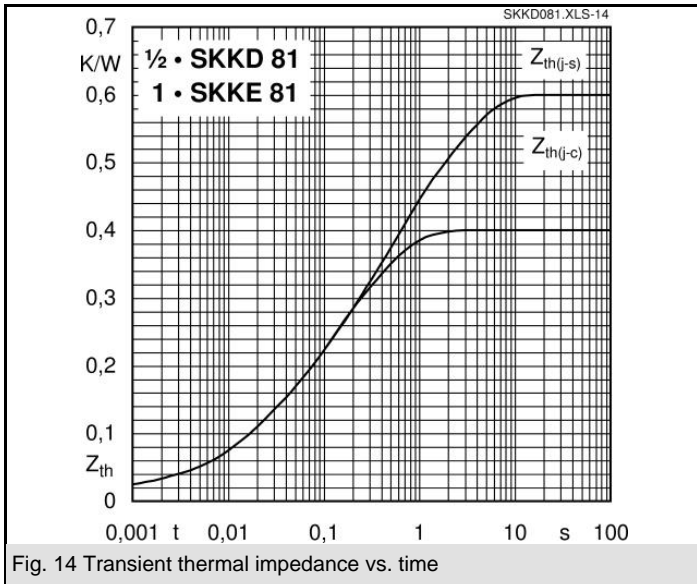Fig. 13L Power dissipation of three modules vs. direct current

Fig. 13R Power dissipation of three modules vs. case temperature

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Fig. 14 Transient thermal impedance vs. time

Fig. 15 Forward characteristics

Fig. 16 Surge overload current vs. time

Dimensions in mm

Case A 10 (SKKD)

* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances and systems is subject to prior specification and written approval by SEMIKRON. We therefore strongly recommend prior consultation of our personal.

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